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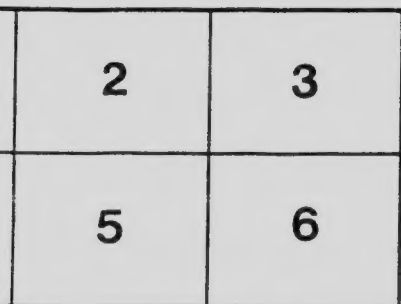
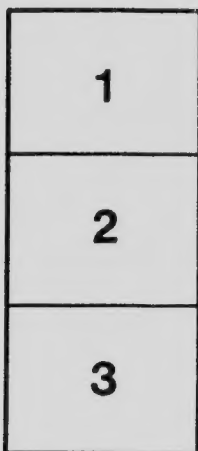
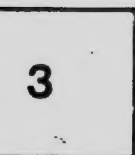
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POTATO SPRAYING FOR LATE BLIGHT AND ROT

BY

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Rot of the Potato tuber due to Late Blight. Note the "sunken in" area on surface of tuber due to the Blight and the discolouration around the edges as well as the large spot of soft rot (X) following the blight. (Photo H. T. Gussow).

DOMINION EXPERIMENTAL FARMS.

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POTATO SPRAYING FOR LATE BLIGHT AND ROT.

The Late Blight and Rot of potatoes is one of the most destructive plant diseases in the world. Partly by killing the plants prematurely before they have time to mature a crop, and partly by rotting the tubers, the annual loss which it occasions is incalculable. Yet this loss can be reduced to a vanishing point by *thorough and timely* spraying with Bordeaux Mixture. If the spraying be carefully done it is practically certain that it will be a profitable undertaking every year, and a very profitable one every year that Late Blight is prevalent.

About five applications will be necessary, and to be perfectly safe the first should be made when it is necessary to apply poison for the Colorado beetle for the first time. That will be as a rule about the middle of July. The succeeding ones should follow about the end of July, the middle of August and the end of August, and the middle of September, or at intervals of about two weeks. It is necessary to put on the spray with a spraying machine of such power that it will force the liquid out in the form of a fine mist. It is better to put on from 50 to 100 gallons to the acre. More will do no harm, though less may suffice when the plants are small.

Preparation of Bordeaux Mixture.

Bordeaux mixture, containing 6 pounds of copper sulphate (bluestone) and 4 pounds of lime to 40 imperial gallons of water is recommended. To prepare this in large quantities proceed as follows:—

(a) Make a stock solution containing 1 pound of copper sulphate to the gallon of water. To do this, measure 40 gallons of water into a barrel, tie up 40 pounds of copper sulphate in a small bag or a piece of canvas, and suspend it just beneath the surface of the water. It will go into solution in this way. Do not use an iron vessel for copper sulphate.

(b) Make a stock mixture of lime water containing 1 pound of lime to the gallon of water. Place 40 pounds (two-thirds of a bushel) of *quick* lime in a barrel and slake it by the gradual addition of water. *Air-slaked lime is useless.* When thoroughly slaked, add more water, working the lime up with it into a paste, and then fill up with water to the 40 gallon mark. Cover both barrels to prevent evaporation.

Both these solutions will keep good as long as they are not mixed, and the spraying mixture is made up from them only as it is required. This latter will not keep and it should be used the same day as it is made. Run 30 gallons of water into the tank of the spraying machine, add 6 gallons of the stock solution of copper sulphate and stir well. Mix up the stock milk of lime thoroughly and draw off 4 gallons, running it through a strainer to keep back the coarser particles. Then stir up the copper sulphate in the spray tank again, and while stirring pour in the milk of lime. The result is 40 gallons of Bordeaux mixture. Never mix the concentrated copper sulphate solution with the concentrated milk of lime.

The spray must not contain excess of copper sulphate in proportion to lime: if it does it will burn the foliage. As lime varies in strength the Bordeaux should be tested with a testing mixture made of half an ounce of potassium ferrocyanide dissolved in half a pint of water. This substance is poison. Add a drop or two of it to the spray and if a distinct brown colour appears where the drop falls more lime is needed. If not, the mixture is ready to use.

The poison for the Colorado beetle can be supplied with Bordeaux mixture. A combination of half a pound of Paris green and one and a half pounds of arsenate of lead is recommended.

Both substances should be stirred up with water until they form a uniform thin paste, which is then added to the spraying mixture, the whole being well stirred.

POINTS IN SPRAYING.

Spray before the blight appears.

Spray before rainy periods and give the spray time to dry. It won't wash off.

Keep the pressure up and cover all parts of the plant.

Half spraying won't pay. Don't waste your time and money proving it.

Potato spraying is as necessary as fire insurance, and besides it pays a dividend every year.

"THOROUGHNESS IN SPRAYING PAYS."

